forest research note

1978 No. 18

Plantation Performance Averages for White Pine

by

R.E. Mullin

This graphical presentation of the average survival and height growth of white pine (*Pinus strobus* L.) plantations is the third in a series on plantation performance. Similar graphs have been prepared for white spruce (*Picea glauca* (Moench) Voss) and red pine (*Pinus resinosa* Ait.) in Forest Research Notes 15 and 16 (Mullin 1978a and b). The establishment period of plantations so studied is the 0 to 20 years after outplanting which precedes that usually found in yield and volume tables.

The data given in Figure 1 are province-wide averages taken from the control or untreated plots of research plantations, rejecting those plots with less than 50% survival at five years after planting. All plots contained over 500 trees and had an average planting density of about 2950 trees per hectare (1200 trees per acre). There were 30 experiments with 3+0 stock and 11 experiments with 2+2 stock, planted by local crews following the usual procedure of the time. Extensions of the lines are by freehand curves from the averages and standard errors shown. Projections to the 20th year represent stands in which no thinning has been done.

Figure 1 gives empirical standards against which any plantation can be easily compared by a simple assessment of survival percentages and average height. It is hoped that this information will assist forest managers in judging the productivity of their plantations, although it should be recognized that modification by region, by site index or by site class must be considered. The averages given could be used to establish arbitrary minimum success levels for judging plantations, below which immediate treatment or replacement would be required. This level is currently considered at 75% of each criterion shown (Mullin 1978a and b).

References

MULLIN, R.E. 1978a. Plantation performance averages for white spruce. Ont. Min. Natur. Resour., Forest Res. Note No. 15. 2 p.

MULLIN, R.E. 1978b. Plantation performance averages for red pine. Ont. Min. Natur. Resour., Forest Res. Note No. 16. 2 p.

Ontario Ministry of Natural Resources

Hon. James A. C. Auld
Minister

Dr. J. K. Reynolds
Deputy Minister

A communication of the Ontario Forest Research Centre to aid management of Ontario's forest land resource. Further information may be obtained from: The Head, Ontario Forest Research Centre, Ministry of Natural Resources, Maple, Ont. L0J 1E0

105-00656/

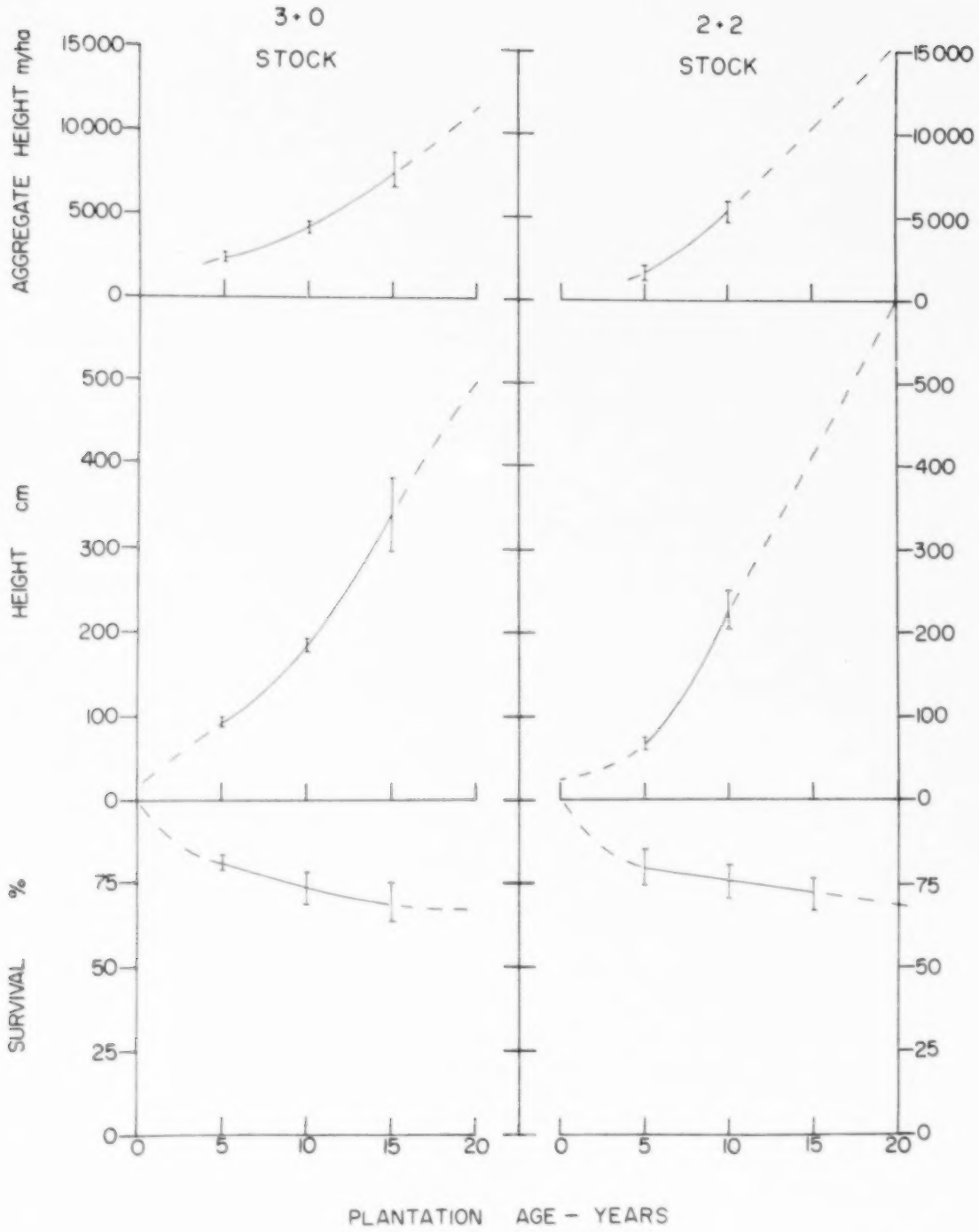

Figure 1 Plantation performance averages for 3+0 and 2+2 white pine: survival (%), average height (cm) and aggregate height (m/ha).